

GEMS Spring Meeting
Tuesday, April 19th, 2016
EPA, room C111 (RTP Main Campus)

Communicating Our Science: Outreach to the Public and Future Scientists

Program

8:00 - 8:45	Registration and poster set-up
8:45 - 9:00	Welcome Stephanie Smith-Roe, GEMS President, DNTP/NIEHS Brian Chorley, GEMS President-Elect, US EPA
9:00 - 10:00	Where Do Ideas Come From? Oliver Smithies, DPhil, Nobel laureate, Weatherspoon Eminent Distinguished Professor, Department of Pathology and Laboratory Medicine, University of North Carolina-Chapel Hill
10:00 - 10:15	Q & A Session with Students
10:00 - 11:30	Poster session (snacks and drinks available) 10:15 - 11:00 Students present at posters 10:15 - 11:30 Outreach representatives
11:30 - 11:45	A Tribute for Elizabeth S. Von Halle, Ph.D. Michael Shelby, Ph.D., DNTP/NIEHS (Special Volunteer)
11:45 - 12:00	Announcements
12:00 - 1:15	Lunch at EPA Cafeteria (students lunch provided in C111)
<i>Split afternoon sessions</i>	
Member Session	
1:15 - 2:15	Building Academic-Community-Government Partnerships to Improve Public Health (Room C111-AB) Rebecca Fry, Ph.D., Associate Professor, School of Environmental Sciences & Engineering, University of North Carolina-Chapel Hill
2:15 - 3:15	A Broader Impact: Extending Your Work Beyond the Lab (Room

C111-AB)

Todd Boyette, Ph.D., Director of Morehead Planetarium and Science Center and co-founder of the North Carolina Science Festival

Student session

1:15 - 2:00

Adventures in Public Science: A Biologist's Journey from Lab Rat to Ring Leader (Room C111-C)

Holly Menninger, Ph.D., Director of Public Science, College of Sciences, North Carolina State University

2:00 - 2:45

Life and Science: The Moving Target (Room C111-C)

Kal Gunasingha, Medical Student and Researcher, National Institute of Environmental Health Sciences and Duke University

2:45 - 3:15

Does Your Environment Affect Your Health? (Room C111-C)

George Woodall, Ph.D., Toxicologist, National Center for Environmental Assessment, US EPA

Both sessions

3:15 - 3:30

Closing Remarks (Room C111-AB and C111-C)

GEMS Spring Meeting 2016 Speaker Biographies

Oliver Smithies, D. Phil.**Weatherspoon Eminent Distinguished Professor****University of North Carolina-Chapel Hill****Nobel laureate**

Oliver Smithies, D. Phil has been the Excellence Professor of Pathology and Laboratory Medicine at the University of North Carolina at Chapel Hill since 1988. He was a professor at the University of Wisconsin for 28 years prior to UNC. Dr. Smithies is well-known for his pioneering work in targeted homologous recombination in transgenic mice. Among his many career honors are the Gairdner Award, the Alfred P. Sloan Award, the Ciba Award, the Bristol-Meyers-Squibb Award and the Albert Lasker Award. He is a member of the National Academy of Sciences, a Markle Scholar, Fellow of the American Association for the Advancement of Science and a member of the American Academy of Arts and Sciences. Dr. Smithies' current research program is focused on the use of gene disruption and duplication to carry out functional analyses of genes in animal models of human disease. He was a member of the Department of Medical Genetics & Genetics at the University of Wisconsin from 1960 to 1988. Dr. Smithies has received numerous awards for his genetics research, especially for the invention and development of gel electrophoresis and for gene disruption and homologous recombination (gene "knock-outs") in mammalian genomes. His awards include: the CIBA Award for Hypertension Research, Alfred P. Sloan, Jr. Award, Gairdner Foundation Awards in 1990 and 1993, Karl Landsteiner Memorial Award and the Founders Award of the Electrophoresis Society. He holds D. Phil. from Oxford University.

Rebecca Fry, Ph.D.

Associate Professor

Department of Environmental Sciences and Engineering; Gillings School of Global Public Health

University of North Carolina-Chapel Hill

Dr. Fry is the Director of UNC's Superfund Research Program funded by the National Institute of Environmental Health Sciences (NIEHS). Dr. Fry also serves as the Director of Graduate Studies in the Curriculum of Toxicology at UNC. She is Co-PI of the T32 training grant in Biostatistics along with Dr. Amy Herring that trains more than 30 pre- and post-doctoral students at UNC.

Dr. Fry's Ph.D. is in Biology and she has post-doctoral training in Toxicogenomics and Environmental Health from MIT. Broadly her research focuses on elucidating biological mechanisms that relate prenatal toxicant exposure to detrimental health outcomes in children. Building off her expertise in the areas of DNA repair, toxicogenomics and systems biology, her research at UNC has been ground-breaking, identifying epigenetic mechanisms that may underlie children's health. A primary goal of Dr. Fry's research is to increase awareness of the deleterious impacts of exposures during the prenatal period and to improve public health initiatives to address this critical issue. She has served on the committee for the National Academies of Science (NAS) National Research Council for the IRIS review of inorganic arsenic, as a reviewer for the cancer and non-cancer risk assessment of arsenic in food by the Food and Drug Administration (FDA), and on the funding selection committee of the International Agency on Cancer Research (IARC).

Todd Boyette, Ph.D.

Director of Morehead Planetarium and Science Center and co-founder of the North Carolina Science Festival

University of North Carolina-Chapel Hill

Just the fifth director in Morehead's history, Boyette has expanded outreach programming, spearheaded the transition from analog to digital fulldome planetarium technology and launched the North Carolina Science Festival. He is also on the clinical faculty of the UNC School of Education and serves as a board member for Learn NC and as president of the Association of Science Museum Directors. Prior to becoming Morehead director in 2006, he was president of the North Carolina Grassroots Science Museums Collaborative, president and CEO of The Health Adventure in Asheville and executive director of Wilson's Imagination Station. Boyette holds a doctoral degree in science education from North Carolina State University. He also holds a master's degree in science education and bachelor's degrees in science education and in chemistry. He is a former high school chemistry teacher.

Holly Menninger, Ph.D.

Director of Public Science, College of Sciences

North Carolina State University

An entomologist by training, Dr. Holly Menninger is a science communicator by passion and practice. She has worked at the intersection of science and society – in policy, natural resource management, and public engagement in science. In 2014, she was named the first director of public science for the College of Sciences at NC State where she currently oversees a series of initiatives designed to build science literacy beyond campus. From 2011 - 2014, she coordinated Your Wild Life, an outreach and science communication program that engages the public in the study of the biodiversity in their daily lives.

She's authored a number of peer-reviewed scientific publications, policy articles, and popular science stories, and her work has been frequently featured in the popular news media. Menninger earned her bachelor's degree in biology from Denison University and her Ph.D. in behavior, ecology, evolution and systematics from the University of Maryland.

Kal Gunasingha

Medical Student and Student Researcher

Duke University

Kal is a third year medical student at Duke University School of Medicine. Born and raised in Baton Rouge, Louisiana, she graduated summa cum laude, University Medalist with a Bachelor of Science in Chemical Engineering from Louisiana State University—A&M (LSU). For her third year, she is currently working on respiratory biology research at the National Institute of Environmental Health Sciences (NIEHS) under Dr. Kleeberger. When she is not in the lab, she stays involved in the medical school by serving as VP of Student Activities of the Davison Council, the medical school's student council, and by involvement in other student groups. She enjoys promoting STEM education in the community through BOOST, an immersive science program for Durham middle school students. She is currently a Second Lieutenant in the U.S. Army and on an Army HPSP Scholarship for medical school. She hopes to pursue a general surgery residency. For fun, she enjoys spending time with friends and family, traveling, and of course, cheering on her Tigers on a Saturday night—GEAUX TIGERS!

George Woodall, Ph.D.

Toxicologist, National Center for Environmental Assessment

US Environmental Protection Agency

Dr. Woodall works under the Human Health Risk Assessment Program in performing chemical risk assessments, developing and improving risk assessment methods, and providing scientific advice and support to various Regional and Program Offices within the Agency. He received his doctorate in Toxicology from North Carolina State University in 1996, attained a Master of Science in Environmental Health from East Tennessee State University in 1985, and a Bachelor of Science in Microbiology and Cell Science in 1983 from the University of Florida. Dr. Woodall served on the National Advisory Committee for Acute Exposure Guideline Levels (AEGs) for the EPA, and has served on or chaired several expert panels for the Office of Economic Cooperation and Development (OECD). Dr. Woodall has also served as an invited panelist to RIVM in the Netherlands and as an adviser to the World Health Organization (WHO). He is author or co-author of over 20 peer-reviewed articles and book chapters, and numerous governmental and intergovernmental reports. He is also member of the Society of Toxicology (SOT), North Carolina SOT, the Editorial Board for Toxicological Sciences, the Society for Risk Analysis (SRA), and Sigma Xi.

Student Poster Presentations

Juan Rodriguez-Benitez and Shayan Dolikhani. *In Vitro Immune Toxicity of Depleted Uranium: Effects on Murine Macrophages, CD4+ T Cells, and Gene Expression Profiles.* Franklin Academy High School, Wake Forest, NC.

Meagan Smith and Jarod Coyne. *The effects of black carbon and diesel exhaust particles on respiratory health.* Franklin Academy High School, Wake Forest, NC.

Vincent Enierga. *The relationship of Molecular Properties with the Pharmacokinetics of Hypertension Medication.* Jordan High School, Durham, NC.

Jing Zhu. *Advances in Biotechnology.* Jordan High School, Durham, NC.

Duriel Covington. *Cloning Organs for Transplants.* Jordan High School, Durham, NC.

Claudia Kennedy. *The Effects of Sex, Cage Type, and Enrichment Type on the Expression of Species-Specific Nesting Behavior in Laboratory Mice.* North Carolina State University, Raleigh, NC.

Arjun Keshava. *Alteration of Cell Cycle Mediated by Zinc in Human Bronchial Epithelial Cells In Vitro.* Wake Early College of Health and Sciences, Raleigh, NC.

Beruk Kiros. *Survey of thyroid-chemical literature: Use of SWIFT text mining tool for problem formulation.* NIEHS/NTP, RTP, NC.

Shivpriya Sridhar. *Immunohistochemical Characterization of Islets of Langerhans in F344/N Rats Exposed to Cobalt (II) by Inhalation.* Enloe High School, Raleigh, NC.

Outreach Representatives

Ericka L. Reid, Ph.D., Director, NIEHS Office of Science Education & Diversity

Holly Menninger, Ph.D., Director of Public Science, College of Sciences, North Carolina State University

Douglass Coleman, Program Director, BOOST program, Duke School of Medicine

Alexandra Ross, STEM Outreach Program, US EPA

Notes
